**The Catapult Game**

Your group’s task is to use mathematics to determine how far away to place your catapult in order to hit the targets on a castle poster.

**Materials:** Catapult, Tape Measure, Grid Poster Paper (1” x 1” squares), Markers, Laptops or graphing calculators

**The Castle**

**B**

**A**

**D**

**G**

**F**

**E**

**C**

12

17

22

27

29

31

32

0

6

10

13

20

25

28

33

Inches from the Paper

*x*, Distance from Launch Point

*y*,

Height Off Ground

**Standards for Mathematical Practice**

1. Make sense of problems and persevere in solving them.

2. Reason abstractly and quantitatively.

3. Construct viable arguments and critique the reasoning of others.

4. Model with mathematics.

5. Use appropriate tools strategically.

6. Attend to precision.

7. Look for and make use of structure.

8. Look for and express regularity in repeated reasoning.

An example of a quadratic regression applet can be found at

 [**http://www.xuru.org/rt/PR.asp**](http://www.xuru.org/rt/PR.asp)

Go to [**http://www.8kindsoffun.com/Catapult/CatapultGUI.html**](http://www.8kindsoffun.com/Catapult/CatapultGUI.html)

to play the virtual catapult game.